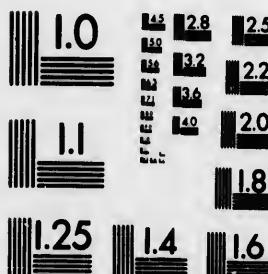
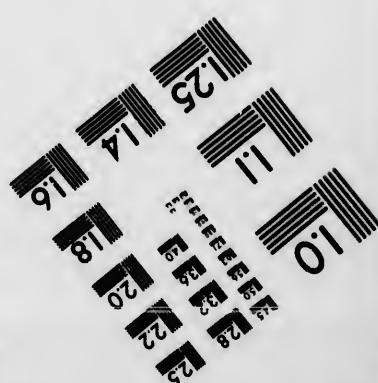
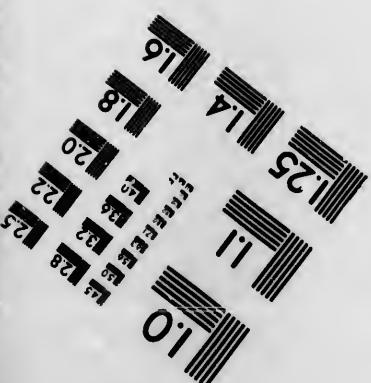


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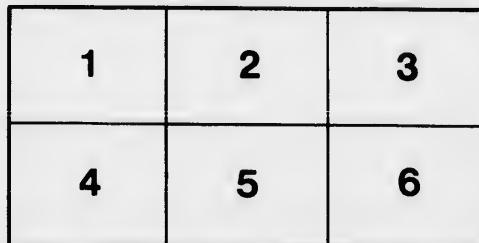
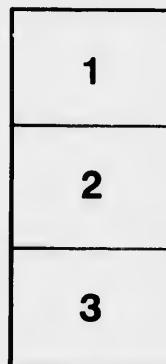
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REPORT

ON THE

OTTAWA AND PONTIAC

COLONIZATION ROADS.

Part of Appendix No. 25, to the Report of the Commissioner of Croton Lands, for 1861.



QUEBEC:

PRINTED BY HUNTER, ROSE & LEMIEUX, ST. URSULE STREET.

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REPORT

ON THE

Ottawa and Pontiac Colonization Roads.

CROWN TIMBER OFFICE,
Ottawa, 27th March, 1862.

SIR—I should have had the honor, at an earlier date, of reporting on the progress of last seasons works on the Colonization Roads in the Counties of Ottawa and Pontiac, trusted to my charge, had it not been that the unavoidably late commencement of some of the works carried them far into the winter; and that unexpected difficulties in compilation, and other causes beyond my control delayed the preparation of such a map of the country north of the Ottawa, as seemed necessary to shew in a satisfactory manner the roads forming the subject of report and the surveyed Townships they are designed to lead to, or through which they pass.

The works to be reported upon are of two classes; the works performed under the appropriation of \$10,000 for the Counties of Ottawa and Pontiac for the year 1861, and those in expenditure of the remaining appropriations of former years.

The works under the appropriations for the year 1861 consist of—

1st. The making of ten miles of the Gatineau and Coulonage road in the township of

2nd. The improvement of the Thorne road, and the linking of three miles in continuation of it, leading to the Gatineau and Coulonage road, in the township of Leslie.

3rd. The building and repair of bridges on the Gatineau and Desert Road.

The works under remaining appropriations of former years are—

1st. The opening of the Onslow and Masham road.

2nd. The improvement of the front road in the lower part of Pontiac.

3rd. The opening of the Eardly and Masham road.

4th. Works on the front road in the upper part of the County of Pontiac.

The Gatineau and Coulonage road was originally projected, and traced in the field by Messrs. Bouchette and Aylen, from the Puagan Falls on the river Gatineau, about thirty miles above its mouth, to the settlements on the Ottawa at the mouth of the river Coulonage, a distance of forty-nine miles; passing successively through the central part of the township of Low, the front of Cawood, generally along the line between Leslie and Home, along the rear of Litchfield and through the south-east corner of Mansfield.

The ten miles of it contracted for, and very nearly completed, extend from the main road on the Gatineau into the last range of the township of Low. It is the most important part of the whole line, not only because it passes through the best land upon it, but also because it gives access to the road line traced northward from the river Pêche in Masham, along the rear ranges of the townships of Low and Aylwin, to the river Pickwick in the township of Wright, which passes through the greatest extent of land generally admitting of settlement that there is in the lower part of the valley of the Gatineau.

The intersection of these two roads therefore forms a point from which settlements could most advantageously be opened extending northward, southward and westward, and will be further explained in proposing the works most immediately serviceable for the ensuing season. The greater usefulness in this manner of the first part of the Gatineau and Coulonage road became a reason for making it in a more thorough manner than might be necessary in the case of a less important road.

The part of this road contracted for and nearly completed is done according to accompanying specification which I prepared, after many years experience, as the best obtaining a good road economically, as regards labor and expense, where the means available did not admit of a first class earth road being constructed. It is opened 21 feet width, the roots and stones thoroughly grubbed out of ten feet in breadth of the centre (practically much wider in all the dimensions), and crowned to the width of sixteen feet with a sufficient rise in the centre; with culverts, ditches and discharging drains, where necessary. The causeways are laid sixteen feet wide, hewn or covered with earth. Bridges are built in the most substantial manner with covering eighteen feet breadth.

Tenders were received for the work on the 26th day of August, after extensive publications, and it was let to the party making the lowest tender, at the following rates, viz.: causewaying \$3; bridging, from three to seven feet high, \$10 per rod; bridges seven feet high, one-seventh additional to the foregoing for every additional foot in height; ditching three feet wide by two deep where required, apart from the ordinary water and draining, including side cuttings (not measuring in the bridges and causeways), \$1.60 cents per rod; and for all other work taken together, that is, for grubbing, clearing and draining, including side cuttings (not measuring in the bridges and causeways), \$1.20 rod; extra excavation, 20 cents for earth and \$1.10 for rock, per cubic yard.

Of the ten miles contracted for, two and a quarter miles remain to be crowned, the necessary culverts and a little causewaying; it is all grubbed out except sixteen rods and there is one bridge 104 feet in length by 12 in greatest height, not yet built, but now in progress.

There are 58½ rods of bridging done, varying from four to fourteen feet in height, including one bridge of 210 feet long by 13½ feet high, another of 117 feet by 10½ feet high, one of 81 feet by 9½ high, and 348 feet in length of substantial wharfing in the bed of Stag Creek, solidly filled, and from eight to 10 feet in height. Of causewaying there are 172 rods, and 135 rods of extra ditching; and although there is very little stony or rocky ground, there are many extensive side hill cuttings from three to five feet in depth.

My accounts to 31st December last, exhibit payments to W. A. Richardson, the contractor, for work performed on this road, amounting to \$3,776.08. The further payment to be made for the completing of work under contract (part of which has since been paid) will amount to about \$900 more, to which should be added \$100 for half a mile of work not yet contracted for, desirable to be done. The final cost will be rather low for the value of the work performed.

Considering the generally rugged character of the Gatineau country, it is remarkable that this portion of the Gatineau and Coulouge road, extending nearly to eleven miles from the Gatineau passes through a tract of country nearly altogether arable, and very free from rocks or stones, the soil of the first part of it being generally a clay loam of the richest kind, and the latter part warm and fertile, though in parts rather light and sandy; and connected with it on each side there are several irregular blocks of land very favorable for the formation of settlements which will open into this piece of road.

The next eleven and a half miles of the road line passes through land of an inferior quality, one-half of it only on an average on the line being fit for settlement, but at a mile and a half south of the line, three-quarters of it may be said to be so. For the next four miles, to the centre line of Thorne, it is of the same inferior description, on the line about one-half fit for settlement—north of it about one-quarter, and southward from it three-quarters may probably be so.

The next eight miles, that is to three and a half miles along the rear of Litchfield, is through land well suited for settlement on both sides, which extends to three miles northward of the rear of Litchfield, much of it is now occupied. This is the best tract on the west portion of the line.

Then after becoming inferior for three and a half miles, it winds through the mountain range, where scarcely half of the land is fit for settlement; and the remaining six miles to the end of the line, near the mouth of the Coulouge, is generally on a light barren sand.

The other parts being inferior, it was considered desirable in the first instance to open up only the eight miles in rear of Thorne and Litchfield, most suitable for settlement (which has already made some progress there), and to connect it with the old settlement of the township of Clarendon, by improving that part of the road from Clarendon Centre to

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le instance to open old settlement of Litchfield Centre to

er Lake, which leads northward through the township of Thorne. By doing so, and turning northward from the east part of the rear of Litchfield, up between the rivers Coulonge and Pickanock, where several lumber explorers had reported that there was apparently good hardwood land, it was thought that a great highway could be provided, having the very important advantage of being alike an advantageous road for settlement to an indefinitely large extent, and a very useful inlet for the lumberers on the rivers Coulonge and Pickanock, whose expenditure for farm produce and team hire would much encourage and sustain settlement. More recent information, however, tending to show that the soil of the seemingly favorable hardwood land, in that direction was too low to admit of the formation of prosperous settlements, rendered the prospect of forming an advantageous extensive settlement road in that direction too doubtful to warrant commencement of it on the scale originally intended.

The idea of opening the eight miles of the Gatineau and Coulange road in rear of Litchfield, on the same scale as the ten miles of the east end of it, was therefore abandoned for the present, as it would apparently lead to nothing of importance; and the operations of the past season, there, were limited to the works on the road through Litchfield and the making of part of it.

The improvement of the Thorne road, including the making of three miles of it on a new site, was required to give proper access to the lands on the west end of the Gatineau and Coulange road, and to the settlements that will gradually be formed on tracts adjoining to the northward and eastward. This road is the natural inlet to these tracts, giving access to them from the steamboat landing on the Ottawa and the village of Clarendon, where the Crown Land Agent's office and the nearest stores for the supply of the country are. It affords a good passage through the first range of the Laurentian Hills, which skirt the Ottawa settlements, and are here met at the rear of Clarendon; and it is the line of communication with the lumbering establishments of Messrs. Gilmour & Co., on the Pickanock, which together with their roads, have been the chief cause of the extension of settlement in this direction.

The road through Thorne is about nine miles in length, from the front to the rear of the township. The first five miles pass through the range of hills above mentioned. On this part, the work done consisted in the improvement of long, steep and dangerously rocky ascents, requiring in parts excavation, and building up with stone, the removal of rocks, ditching, &c., together with 224 feet of most substantial bridging, in three places; with wide cuttings and levelling of banks, and 300 feet of hewn causewaying. Of the remaining four miles, three miles and three chains of new road were opened, with a width of sixteen to twenty feet; twelve feet wide in the centre of it, well leveled, after being thoroughly grubbed and ploughed. There are considerable cuttings at ascents and side hills, a very substantial bridge sixty feet in length, and 210 feet of hewn causewaying.

The total expenditure made on the road in Thorne, otherwise called the Otter Lake road, is \$1,047.10.

Much of the work was of an irregular nature that could not be suitably let by contract and required experienced skill. It was done by a party of well selected men under the charge of Mr. James McLaren of Portage du Fort, who had formerly executed some very difficult work for me on the Bytown and Pembroke road, with unusual skill and economy, as he has also done in the present instance.

Finding many causeways to be made, and bad rocky hills that would have been very expensive, on the upper part of the old track, I spent two days in exploring and locating the three miles of new road above mentioned instead of it. The site of the new road is as remarkably good as the other is bad, passes through good land for settlement, which the other does not, and shortens the distance one mile for eastward, and two miles for westward travel, on the Gatineau and Coulange road line, which it intersects at the rear of Thorne. It also there connects with several lumber and settlement roads, which, as the country there becomes generally level with a light dry soil, are remarkably good though opened at little cost.

Within a radius of six miles of the end of this new road, there is much good land for settlement though some of it is stony, but unless the existence of some considerable extent of land fit for settlement be definitely ascertained beyond that, nothing of importance can

OTTAWA AND PONTIAC COLONIZATION ROADS.

be done here; and the completion of the road a few miles westward, on a small seems to be the utmost that could be desired till further conclusive information be obtained.

The building and repair of bridges on the Gatineau and Desert road, is the division of works on which a small expenditure on account of the appropriation of £500 has been made.

In the beginning of November last, I made a rapid but careful reconnoissance of road up the Gatineau as far as the river Desert, as formerly proposed, taking the necessary notes as to the state of the road, soil, surface and obstacles, to enable me to make an approximate estimate of the cost of completing on a moderate scale that very important alike for the settlement of the country and the business of it.

As the expenditure of a small sum of the appropriation for 1861, for necessary objects on the Desert road had been proposed, and as some of the bridges were in a dangerous state, or required to be built to prevent the obstruction of travel in spring, I let part of the works to be done on my way returning. It consisted of four small jobs, viz. :

The repair, raising six feet and lengthening to 170 feet of the bridge over Lepine brook, a little above the Pickanock, let for £110. The building of a bridge over Lepine brook, 75 feet in length, let for £50. One of 90 feet on Carisse's brook for £50; and the building of a bridge and causeway at St. Amour's brook, 344 feet long, for £111.25, all the township of Wright.

The payments on account of these works charged in my account current to 31st December last, amount only to £186, but they have all since been completed and paid excepting small reservations made till spring.

Also the bridge over the river Pickanock, which was built with Colonization money, I found on careful examination, required to be raised six feet higher, to prevent its probable destruction by spring floods, and to be lengthened to 236 feet by adding 70 feet to This work has since been let for £320, completed and paid for with a small reservation.

The extension of another bridge, let for £40, is the last work on the Desert road now in progress.

Earlier in the fall, I visited the Crown Land Agents in the lower part of the County of Ottawa, and collected from them and from the lumberers and others best acquainted with the interior, such information, as added to that derived from Surveyors and their returns of surveys on record in my office, confirmed my previously expressed opinion that the valley of the Petite Nation river was the most favorable site, next to that of the Gatineau, for the opening of a great highway into the interior country north of the Ottawa, as a Colonization road, and that such a road on the east side of the Petite Nation river would pass through much good land for settlement. Having obtained your sanction, I immediately instructed Mr. Leduc, of St. André Avelin, to survey such a line of road, up through the township of Suffolk, with a view to its further continuance. The result of his survey is highly satisfactory, but no expenditure has yet been made in work upon this line of road. I shall learn further notice of it and of the Gatineau and Desert road to the concluding part of the report, suggesting future operations.

Of the work of last season, under remaining appropriations of former years, the first begun was the opening of the Onslow and Masham road.

This road commences at the Catholic Church on No. 4 of the 8th range of Onslow, and extends to No. 28 of the 12th range of that township, where it joins the Masham road at the river Pêche.

It has been opened throughout, from the vicinity of the church, from twelve feet in width to six feet in difficult places, among rocks; the hills are dug and stones removed so as to make it passable for a cart. There are causeways made on it amounting to 256 feet, and a substantial bridge on the outlet of Wolf Lake, 166 feet in length, upwards of ten feet in height, on block work, with hewn covering. The bridge and causeways were made 18 feet in width to suit the dimension of the road when widened by the statute labor of the settlers.

The appropriation for this road was £900 of which there has been expended £755, leaving £115 for further work.

The work was done by a party of men employed by the month under Mr. Benjamin Moore, of Onslow, whose energy and great experience in conducting extensive lumbering operations in the woods, secured the best possible result for the money expended.

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The improvement of the front road, in the lower part of Pontiac, was done under the appropriation of \$1,000 for that road from the County line between Ottawa and Pontiac to Portage du Fort.

On careful examination and inquiry, I found that expenditure on improvement was required on parts of the road in Clarendon, where it is rough and miry, and especially the township of Onslow, below the river Quio, where there was an extent of about four miles of extremely bad road, one half of it being over rough rocky ledges, and the other miry and unmade, requiring much work in ditching, &c. This piece of road had long been the chief obstruction to communication by land between the county of Pontiac and the city of Ottawa. The building of several bridges on the front road, in the lower part of the township of Onslow was also very much required.

Elsewhere, especially in the township of Bristol, I found the road good and presenting no obstruction to travel, and therefore not meriting any expenditure on it from the appropriation, while the other parts mentioned so much more required it. My examination took place at a time when country roads are in their worst possible condition.

With the exception of the improvement of a dangerous spot, on a bare rock, on the road to Clarendon, the doing of any work upon it in that township was deferred, not only because it was so late in the season but also because an apparently desirable change of a part of the road was proposed, which required examination.

The expenditure of last season was therefore limited to the improvement of the very worst parts of the road in Onslow, and the building of bridges already mentioned.

This work was also done by Mr. Benjamin Moore and his party, and in such a manner as to elicit an official expression of approbation from the Municipal Council.

The work was commenced at the north side of the Quio bridge, on No. 11 of the 3rd range of Onslow, and consisted in the making of bad spots by crowning and draining, the moving of rocks, cutting of side hills, the making of nearly a mile in all of ditches, with new culverts. On one hill nearly 300 tons of stone were removed, and part used for new work. Only 136 feet of causeway were made, but on the lower part of the road, seven bridges were built, amounting to 464 feet in length, some of them eleven feet in height, and all constructed most substantially.

The total expenditure charged in my account to 31st December last, on account of the work on this road of the \$1,000 appropriated is \$735, leaving a balance unexpended of \$265 for works to be done in Clarendon. (See Synopsis herewith.)

Parties in Clarendon acquainted with the ground informed me that for about seven miles, between No. 8 and No. 24 of the second range of that township, where there is a great bend in the front road, and some bad ground to be passed, the bend could be cut off, turning upwards of a mile of distance, and a much better site found by carrying the road nearly straight between the above points, passing in, or along the rear of the 1st range, directly through a dry, nearly bare sandy red pine brûlé—and the change of the line here is strongly recommended by some of the leading settlers, as it would give a constantly dry road that would require almost no repair instead of the present line, whose clay ground will always become exceedingly cut up, in wet weather in the fall. The parties recommending the alteration say, with justice, that though it would not benefit them, as they do not reside on the proposed line, it would be a great advantage to the general travel, especially of people from the Upper Canada side of the Ottawa, who would cross on the bridge now building at Portage du Fort and avail themselves of the road on the north side of the Ottawa, which, by cutting off the great bend of the river is about ten miles shorter than the road on the south side to Ottawa city; which is all unquestionably true.

Not having time to do so myself, I employed two competent persons to go over the proposed line, who found it to be as stated. \$500 in addition to the balance remaining of the appropriation would open this line and give a better and shorter road than the present one and a road that would be sound and useful in the wet weather late in the fall, when most required, when the other would be scarcely passable. It is extremely difficult to see why it should be made with colonization road funds, but an additional appropriation for it would be at least as justifiable in that respect as the one already made.

If by strict definition a colonization road be one necessary to give access through, or to public lands fit for settlement, not already otherwise accessible, the front road in the upper part of Pontiac is much more strictly one, as it extends beyond existing continuous

steamboat communication, and facilitates access to the vacant lands north of it, above the fort.

The remains of appropriations of former years for the front road in the upper part of the County of Pontiac, under which works were performed last season, were \$650 for part from Black River in Waltham to the Coulonge in Mansfield, and \$250 for the Chichester and Deep River Road, to be spent on the uncompleted part in the upper part of Chichester.

As it was not till I received an official communication of the 22nd October, that I was informed of the amounts actually at my disposal, or the works to which they were applicable, remaining of former appropriations and that in some cases, after that, remote localities had to be visited, and the work to be done ascertained, and agreements made on the spot for carrying them on, including the collection of men, and the purchase and forwarding of tools and provisions, it will be evident that some of the works were necessarily only commenced, when such operations generally are being closed and reported upon.

Under such circumstances, I trust, that it will not be considered extraordinary that the works were not all completed.

As the work to be done under the last mentioned appropriations, consisted chiefly in the building of several bridges, the want of which constituted the chief obstacles on the road between the Coulonge and Black River, it could be proceeded with, though I had to be visited, and the work to be done ascertained, and agreements made on the spot for carrying them on, including the collection of men, and the purchase and forwarding of tools and provisions, it will be evident that some of the works were necessarily only commenced, when such operations generally are being closed and reported upon.

He suspended proceeding with the latter at the instance of the Municipal Council of Chichester, who were anxious to submit a change in the line of road to my decision.

Mr. Proudfoot was interrupted by severe illness and by unfavorable weather for getting out of the timber for bridge work in progress; his works will be completed during the incoming season.

He has, however, built three substantial bridges of hewn timber, one of 30 feet in length, of 9, 7 and 12 feet in height respectively, with another of 180 feet in length in course of construction, when he ceased working, besides making at the mouth of a heavy side cutting of 600 feet in length, with log side wall; all in the township of Mansfield.

The expenditure charged in my account to 31st December last, on account of work under Mr. Proudfoot's charge, amounts to \$535, leaving a balance then unexpended of \$365. to be applied to them next season. (See Synopsis herewith.)

When at Mansfield making arrangements for getting these works done, I made a sectional measurement of the bridge site on the river Coulonge on this road, so as to me to make an estimate for a bridge there, as the want of one renders this river, which is four hundred feet wide and nearly six feet deep in the channel, a great obstruction to travel and the extension of settlement. I beg further to refer to it in the concluding observations as to further works.

The opening of the Eardley and Masham road is the last work remaining to be completed of those under appropriations of former years.

This road extends from the settlements on the Ottawa in the township of Eardley, those on the river Pêche in Masham, passing through the notch in the Eardley mountain, with very gradual ascent, behind the steamboat landing of Rocky Point. It is the shortest and most favorable route into the settlement on the upper part of the Pêche, and part of the northerly road line traced by Messrs. Bouchette and Aylen, to the Pickanock.

From where the opening of it commenced in Eardley, to the river Pêche, it is over six and a half miles in length. The work on it was done by Mr. Mongin, (who owns a saw mill on it,) as overseer, with a party of men hired by the day. It consists in opening out, through woods, of about three and a quarter miles of it, and elsewhere in an old lumber road that in places coincided with it, to the width of 16 or 20 feet required, and the partial building of a bridge on it over McGee's Creek, which is to be 14 feet in length of cord and 14 feet in height; but which was not finished owing to the formation of ice on the steep banks at it, rendering it dangerous and too difficult to be traversed late in winter.

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The appropriation for this road was only \$400, of which there has been expended and carried in my account to 31st December last \$373, including \$1.50 on account of the Thorne and Thorne road, (see following synopsis), leaving \$27 further available. With a small addition to it from the appropriation of 1861, this sum will be sufficient for the completion of the unfinished bridge on McGee's Creek. Besides the expenditure on account of the foregoing, there has been

Besides the expenditure on account of the foregoing works, a payment is charged in account to 31st December last of former year's appropriation, of \$251 50 to William Higgins overseer on the Clarendon and Thorno road. This was not for work performed under direction, it was in liquidation of his claim for the amount of two pay lists, for work done on that road, referred to me for settlement, and for which there remained of former appropriation, the sum of \$250, the difference of \$1.50 being transferred to the account of the Alley and Masham road as above mentioned.

It will be observed by my accounts that with the exception of the ten miles let by contract in the east end of the Gatineau and Coulonge road, the works were performed by messrs, with parties hired by the month or day. This was done because it was necessary to have the road ready to the account of the

This was done because it was preferable for various reasons, the irregular nature of work not admitting of its being let properly by contract, the lateness in the season notwithstanding the delay of doing so, or the work being such as required the judgment of a competent overseer experienced in it. The wages of the men, with provisions and a report, gives an average of 84½ cents per day's work, which is low on the Ottawa.

Synopsis of expenditure charged by A. J. Russell in his accounts rendered to 31st
the Municipal Council, on account of the appropriation of \$10,000 for Colonization Roads in the
road to my decision. -
favorable weather. -
number, 1861, on account of the appropriations of \$10,000 for Colonization Roads in the
cities of Ottawa and Pontiac, for 1861.

Payment to W. A. Richardson on account of contract on Gatineau and Coulonge road.....	\$3,776.0
Do. or account of works on Otter Lake road in Thorne	1,047.10
Do. on account of bridges on Gatineau and Desert road.....	186.00
Do. for advertising road works by order of Department in Quebec Do. to P. Aylen, Esq., for occasionally inspecting and measuring works	102.00
Contingencies and travelling charges, including expenses of recon- noissance of road to River Desert	102.00
Remuneration to A. J. Russell for superintendence of the above and of other works, under remaining appropriations of former years.....	163.34

Total received by A. J. Russell on account of the above.....	\$5,776.54
Do. expended as above.....	\$6,000.00
	5,776.54
Balance in his hands by his account current to 31st Dec., 1861. \$	223.46

Synopsis of expenditure of old appropriations for roads in the Counties of Ottawa and
Gatineau, autumn 1861, by A. J. Russell.

Onslow and Masham Road.

Amount.....		\$ 900.00
Expenditure, three pay lists.....	\$443.92	
Proportion of remainder of B. Moore's account.....	327.08	
Proportion of contingencies.....	14.00	
		\$ 785.00
Balance unexpended 1st January, 1862.....		\$ 115.00

OTTAWA AND PONTIAC COLONIZATION ROADS.

Onslow and Clarendon Front Road.

Amount .....	.....	\$1,000.00
Expenditure, B. Moore, two pay lists.....	.....	8394.96
Proportion of remainder of B. Moore's account .....	.....	290.81
A. Wilson's account .....	.....	35.65
Proportion of contingencies.....	.....	13.58
		8 735.00
Balance unexpended, 1st January, 1862.....	.....	8 265.00
Off this balance—paid John Gordon, in January, 1862, for assisting in exploring last fall, not in account, \$5.20 .....	.....	8 259.80

Pontiac Front Road.

Amount for Mansfield .....	.....	\$ 650.00
Do. for Calumet and Deep River .....	.....	250.00
		8 900.00

EXPENDITURE.

Amount of S. Proudfoot's account.....	.....	\$513.83
Cost of transport of supplies paid by A. J. Russell.....	.....	8.80
Proportion of contingencies.....	.....	12.37

Balance unexpended on 1st January, 1862	535.00
		8 365.00

Eardley and Masham Road.

Amount	\$ 400.00
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EXPENDITURE.

Amount of F. Morgan's account.....	\$366.60
Proportion of contingencies.....	4.90

Unexpended in payment to Hodgins for Clarendon and Thorne Road per pay list.....	.....	\$371.50
		1.50

Balance unexpended on 1st January, 1862.....	\$ 373.00
		8 27.00

Clarendon and Thorne Road.

Amount	\$ 250.00
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EXPENDITURE.

Paid Wm. Hodgins amount of pay list.....	251.50
Over expended and charged to Eardley and Masham road.....	1.50

RECAPITULATION OF EXPENDITURE.

Onslow and Masham road	785.00
Onslow and Clarendon Front do.....	735.00
Pontiac Front do.....	535.00
Eardley and Masham do.....	371.50
Clarendon and Thorne do.....	251.50
Total.....	<u>\$2,678.00</u>

RECAPITULATION OF BALANCES ON HAND, 1ST JANUARY, 1862.

Onslow and Masham Road.....	\$ 115.00
Onslow and Clarendon Front do.....	265.00
Pontiac Front do.....	365.00
Eardley and Masham do.....	27.00
Total as per account current	<u>\$ 772.00</u>

Expended in January, 1862, on account of Onslow and Clarendon road, paid John Gordon \$5.20.

PROPOSED WORKS.

From information heretofore acquired, and recent careful investigation, I would respectfully recommend the following as the most suitable further works for the advancement of Colonization in the Counties of Ottawa and Pontiac.

1st. The opening of the north road surveyed by Messrs. Bouchette and Aylen, on and near the line between the Counties of Ottawa and Pontiac, northward and southward, from the point where it intersects the west end of the ten miles of the Gatineau and Coulonge road now nearly completed.

The bridge built over the Stag Creek, where they intersect, serves for both of these roads. This north road line is laid off into lots, and by Mr. Aylen's report from seven-eighths to four-fifths of them are fit for settlement, on the 13½ miles from Stag Creek northward to the Pickanock, which, including sinuosities may be upwards of 16 miles of road. It passes along the front of the township of Stanhope, now called Alleyn, recently sub-divided into lots by Provincial Land Surveyor Holmes, who reports it to contain much good land, especially south of the Pickanock, which agrees with what was previously known as to that part. From Mr. Holmes' statements, and Provincial Surveyor O'Hanly's report of exploration of that and other townships, it would appear that by turning westward, this road line could be continued at least twelve miles further inland, generally fit for settlement, southward of Stag Creek the land on this line, as far as the 8th range of Masham, is all suitable for settlement, which with sinuosities may be fifteen miles of road line.

This would give upward of thirty miles of settlement road in the most favorable country the valley of the Gatineau affords, besides its probable extension at the north end, and the continuation westward of the Gatineau and Coulonge road, all branching from the part of the latter made last season. As this extent is all, as yet, unoccupied, I consider it the most advantageous and most readily available field for the formation of settlement in the territory under my charge. As timber agent, I would therefore propose the opening of this road as the first object to be provided for, and that I should devote to the making of it the remainder of the appropriation of last season, with as much of the appropriation for the ensuing season as may be available for it.

To make this road as good as the best class of colonization roads in Upper Canada, would require an outlay of about \$500 a mile; some of them cost nearly \$700 a mile, partly from defective original specifications and partly, in some cases, from their having required going over from not having been completely made at first. The accompanying specification affords a better road, for the cost, than any other that can be made. It con-

centrates the labor on the making of a sound, though narrow road bed, where the wheels run. Without that, additional earth is useless, either in a rugged or dry sandy country, and even in clay soil a greater breadth of muddy surface is a poor substitute for crowning and drainage. The clearing of a greater width of road than is going to be used as such is simply wasting the money—that should be applied to making a sound, dry and even carriage way—in clearing land at the sides, to save the settlers the trouble, or to grow up again in bushes. If a road be made by merely cutting the roots and stumps close off by the surface of the ground, in the roadway—instead of thoroughly grubbing out the roots, stumps and stones from nine feet, at least, in width of the centre—the remains of the stumps will always be protruding afterwards, rendering the road bad and dangerous for rapid travelling, or should the road be subsequently re-made, they must be then grubbed out at more cost than if the trees were standing. In the same manner, if narrow causeways be made of small pieces of wood when a road is first opened, besides the risk of their being dragged into confusion by the drawing of heavy loads over them, and the impossibility of teams passing each other on them, they remain as nuisances when the road is afterwards properly made, or are thrown aside as useless, and replaced at further cost.

For these reasons, therefore, it is desirable, to avoid future loss of labor, that in opening roads, nine or ten feet of the centre should be thoroughly grubbed, and a sound road bed made of it, and the causeways and bridges be made wide enough for two vehicles to pass on them, especially on first class settlement roads leading to large areas for settlement, and likely to be much used.

Where it might be advisable to adopt an inferior description of road to that provided for in the annexed specification, to meet the requirements of economy, or for the opening of branch roads of less importance, the crowning and grading, in forming the road as mentioned in the specification, might, with the greater part of the side hill cuttings, as to width, be left to be done by the settlers, and the grubbed part of nine feet in the centre be merely solidly levelled so as to be made solidly passable for a loaded wagon. This is the least work that can be done without future loss, and it would afford a rough but passable road, with many bad spots in it, but it would be as good as the roads are, in many existing settlements. There would be labor to add, but none thrown away on it. Such work might be designated as affording a second class road.

A third class road might be opened in an inferior manner, the width of the road and causeways to be fourteen feet, at most; no grubbing done; the stumps to be cut close to the surface, and a passable track for a lightly loaded wagon made throughout.

In this case the causeways and bridges would be the only part of the work that would be of value in future making of the road, as, till the stumps and roots become completely rotten, the grubbing and grading would all have to be done as if in standing woods.

The cost of making roads of either of these descriptions depends altogether on the nature of the ground and timber where they pass, and the prices of provisions and labor in the locality. As pine trees (whose stumps are expensive to grub) are so frequent in the Ottawa country, and so very much of the land is stony, rocky and uneven, and as the great market occasioned by the lumber trade sustains the highest prices for produce and labor known in the Province, the cost of making any kind of road should be very much greater here than is usual elsewhere.

In ground of the usual ruggedness, a road of the first class mentioned, made according to the accompanying specification, would cost, as stated, \$500 a mile, causeways and bridges included.

The second class described would cost \$380.

The third class, or ungrubbed passage for a wagon, would cost \$300 a mile.

The bridges and causeways in the two last would be nearly equal in quality to those on the first, and be serviceable when the roads were completed and enlarged to the usual width.

Having made this long digression, as it seemed to be necessary in explanation of proposed future work, I beg to revert to the north road, from the Township of Masham to the Pickanock, which intersects the end of the part of the Gatineau and Coulonge road made this season. As presenting the best site for immediate settlement on the Gatineau, it is open it on the scale of the second class road mentioned, at a cost of about \$380 a mile,

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In connection with this, the opening of the Gatineau and Coulonje road westward, from the part made this season, might be continued, on the above scale, to the termination of the road made this season, as already mentioned, in Thorne, a distance of fifteen miles, and thence twelve miles further. But as the land on the first fifteen miles is not so suitable for settlement as on the north road (though more than half of it will eventually be occupied), and as the westerly twelve miles of road line, though passing through good land already partly settled, has not been definitely ascertained to lead to any considerable extent of good land beyond it, neither of them (though well worth opening, and meriting an appropriation, should there be funds disposable) are so important or so immediately desirable to be opened as the north road already mentioned, or the others that I shall next specify.

Though secondary, as a great inlet for settlement, to the main road up the Gatineau, to which I shall again revert, a road up the valley of the River Petite Nation is the next that merits attention from its immediate utility and probable great importance from the extent of good land it will open for settlement.

This road line commences at the existing road in the township of Ripon, on the east side of the river Petite Nation. Thirteen and a half miles of it were marked out last fall, by Mr. Leduc, under my direction, as before mentioned, leading up through the township of Suffolk to its north outline. I would propose continuing thirty or thirty-five miles further northward, to Lake Monamming, a tributary of the River Rouge, where, from definite information and documents of survey in my possession, it would traverse a large tract of arable land, of a superior quality for settlement.

On the part surveyed by Mr. Leduc, he says he found "the land, though uneven generally, yet nevertheless very advantageous for settlement, the soil rich and suitable for cultivation and the production of all kinds of crops; the wood-maple, beech, hemlock, basswood, and fir of a tall growth, with very little pine;" and in an exploratory excursion northward, from the end of the road line he traced, he found the soil to continue arable and fit for settlement. For thirty-five miles of this line my information is from surveys performed at the near and the far end of it; of the middle part, the reports of lumber hunters who have traversed it, are very favorable, describing the land as resembling that of Suffolk.

As this presents us with the site of a general highway of forty or fifty miles in length, from which lines of settlement may be opened along concessions branching from it, right and left, as in Suffolk, with the lumbering works on the Petite Nation and the river Rouge offering a considerable market for farm produce, and being the nearest and one of the largest favorable tracts on the Ottawa, it offers an important field for colonization, especially for the surplus population of the adjoining seigniories and parishes.

I would suggest that this should be opened as a first class colonization road, as described in the accompanying specification. As labor is rather cheaper in that locality than in some others on the Ottawa, the cost might be somewhat under \$500 a mile, all charges included, especially as dry loam is the prevalent soil in parts.

To open the thirteen and a half miles laid out would, at the above rate, cost \$6,750. By reducing the work to levelling solidly on very dry, sandy ground, \$6,000 might be sufficient.

The third work I would suggest, as most urgently meriting attention, is the road from the rear of the township of Hull to Priest's Creek and the township of Bowman on the Rivière aux Lièvres.

This line of road touches the north-west angle of Templeton, and continues nearly along the line between Wakefield and Portland to Bowman. A small appropriation of colonization road money was very advantageously expended upon it last season, by Wm. Hamilton, Esq., of Cantly, in commencing to open it at the lower end. It should be continued at least sixteen miles further. It passes through a large tract of good land, lying partly in Wakefield, Portland and Denholm, now being settled, giving the most direct access to it from the City of Ottawa. It would open up most advantageously the land fit for settlement between the Gatineau and the Rivière aux Lièvres, and on the west bank of

OTTAWA AND PONTIAC COLONIZATION ROADS.

that river, which does not, on this part of its course, extend beyond the township of Bigelow, above it, being inferior and further up the high road between these rivers, comes close to the latter, in a form too rugged for settlement.

This road is essential for access to the Norwegian and German settlement now forming in Bowman. If the encouragement of such immigrants is desirable, it would seem especially so that a road of some kind should be afforded the first settlers of that class in the part of the Province, who, from their ignorance of the English and French language, suffer much greater inconvenience in commencing than other settlers.

As this road cannot be carried very far with advantage, an expenditure upon it of \$300 a mile, may probably be considered sufficient, which would render an appropriation of \$4,800 for it desirable. But as the sum of \$500 advanced for provisions for the destitute Norwegian and German settlers in Bowman, and for which I hold their notes, payable in labor, if so required, is chargeable to the road, but possibly may not all be recoverable, it would seem desirable that the appropriation should not be less than \$5,000.

The Rivière aux Lièvres affords a water communication from above the falls at Buckingham village to the township of Bowman, but in ascending there are several portages, besides rapids, where it is necessary to tow or pole up. A road up the valley of the Rivière aux Lièvre is very desirable, alike for the purpose of settlement and for the traffic of the lumber trade. The road on either side is passable for a cart but a few miles above the village of Buckingham. I am not able to give an opinion how such a road should be carried. Where the Rivière aux Lièvre traverses the ridge of the Laurentides, at and near the High Falls, there is much rough land, and unfavorable country above that, which would require much examination to enable one to judge.

Much of the township of Villeneuve is bad land and mountainous. The township of Wells, above it, is better, with much good flat land extending up the Rivière des Sours.

From where the Kiamaca joins the aux Lièvres, that is, about eighty-five miles directly northward from its mouth, the country, as elsewhere on the north side of the Ottawa, and at that distance from it, changes from high rugged hills to a much lower undulating surface, and is much more arable. The good lands on the upper course of the aux Lièvre will most probably be settled in connection with the Gatineau.

The lower part of the valley of the aux Lièvres, excepting near its mouth, seems much less suitable for settlement than the country east of it, drained by the Lower Blanche and the Petite Nation, which is altogether on a lower level.

I would suggest that a line of colonization road should be surveyed and opened, diverging from the road from the steamboat landing at the village of Thurso to the river Se. Seque, and passing up through the township of Derry East, on the east side of the Blanche, where it would intersect much good land, and northward through the township of Lathbury, which is reported to be favorable for settlement.

I am not in possession of sufficient information to say how far this line of road might with advantage be carried. But the land to be opened for settlement by this line being so near the Ottawa, and connecting with so accessible a part of it, so near its mouth and to the port of Montreal, would seem to render the survey of such a road line, after careful exploration, and the opening of it for settlement, very desirable.

It is equally desirable that a line of colonization road should be explored and opened from the west end of lake Blanche in rear of Lochaber northward, nearly along the line between the townships of Derry East and Derry West, where there are vacant, good lands, superior in quality to those already settled to the southwest. This line may be carried along the east or west side of the west branch of the Blanche, as further examinations might dictate, and thence up along the line between Villeneuve and Lathbury, or thereabouts, into the rear of the township of Wells, where the land is well suited for settlement. This road would give access to the valley of the Rivière des Sours, where there are extensive flats of arable land, reported to be good, down which a branch road might probably be carried with advantage to the Rivière aux Lièvres.

The townships of Derry are described as containing a good deal of good land, hilly but not stony, and of a deep fertile soil. Beyond the 4th range of Derry West no lands were taken up last fall, nor in Derry East except where a few squatters were settling up the Blanche.

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These two last mentioned roads would give access to the nearest vacant lands in the
city of Ottawa, suitable for settlement.

The settlements generally forming on the Rivière aux Lièvre, and the large amount
revenue that government has realized from the extensive lumbering operations that have
years been carried on in connection with milling establishments at the thriving village
Buckingham on that river, are strong reasons for opening a road up its valley, but as the
country on the banks of the river, to a considerable extent, presents difficulties requiring
careful examination, I am not in possession of the information necessary to enable me to
give any opinion of value as to where such a road should be located.

I have made these suggestions and observations as presenting subjects for further
consideration with a view to the development of the lower part of the county of Ottawa.

Turning to a more remote part of the Ottawa country, I would in the fourth place
recommend us meriting an appropriation of colonization funds for the opening of a road up
the west side of the river Coulonge, to give access to a tract of good land in the west part
of the township of Pontefract, and between it and Black River, and the building of a
bridge over the river Coulonge.

The township of Pontefract was surveyed lately by Mr. J. Robertson, of Fitzroy.
He is a very reliable and thoroughly practical judge of the quality of land; what he calls
good land is unquestionably so. He condemns as unsuitable for settlement that part of the
township lying east of the river Coulonge, even where it is very fine looking hardwood
land, it is in general too shallow in soil for proper cultivation or certainty of crop in dry
seasons, though the demand for farm produce will doubtless soon lead settlers to occupy the
better part of it.

The west side of the township, however, contains much good land fit for settle
ment for about eleven ranges in depth, which also extends westward toward Black
River.

The small proportion of good land in this part of the Ottawa country, compared with
the great extent suitable only for lumbering, renders this tract of much value for settle
ment. It is near the Ottawa, and being on the way to the extensive lumbering regions on
the Coulonge and Black River, the settlers will be in the most advantageous position for
obtaining good prices for their produce, and the road, so far as it may be opened, will present
the double advantage of being useful to the lumberers working up these rivers, as
well as to the settlers.

I would suggest that this road should be opened from the front Pontiac road in Mans
field back four miles through that township to Pontefract, and thence about twelve miles
further to and along its west outline, the site to be more definitely determined on survey of
the line—in all say sixteen miles, at \$300 a mile, making it a road of the third class, as
regards scale of work, would require an outlay of \$4,800.

The Coulonge is the first unbridged river in the main front road on the north side of
the Ottawa, above the city, and being a large one, it is the first serious obstacle to commun
ication and to the progress of settlement.

The river Coulonge enters the Ottawa about a hundred miles above the city, and as
the country at that distance is but partially settled and only on the front, the main road
here is virtually a colonization road essential to the further progress of settlement, and the
building of a bridge over the river Coulonge is much required, not only for the upward
travel on the Ottawa in connection with lumber trade and the eastern settlements, but also
for the extension of settlement in the townships on the main river, as well as on the tracts
in the rear like that just mentioned.

As already mentioned, I took the necessary sectional measurement of the river to enable
me to make a plan and estimate of the proposed bridge. The river is there four hundred
feet wide and about six feet deep in the channel, with a strong current and high steep
banks and therefore quite unfordable. The bridge requires to be five hundred and ten
feet in length, and twenty four feet in height from the bottom of the channel. It should
have six water ways, of sixty feet wide, or five of seventy-two feet, with queen-post tresses
in the latter case, or king-post tresses in the former; the cost would be equal in either case.
To give security, as the bottom is of shifting sand, the piers should be well sunk with pro
jecting foundation pieces, to give breadth of bearing, and they should be sent down with a
good bed of fascines under them, which will prevent the eddy behind the piers and the
plunge of the swell in front during freshets, from undermining their foundations

Including \$100 for the making of the road approaching the site at the east end, appropriation should be \$3,232; with the \$1,800 estimated for the Pontefract road, total for these works would be \$8,032.

A bridge is also much required on Black River; at thirteen miles by the road above the Coulonge. Black River is the last large river on the Pontiac road which terminates twenty miles beyond it, at the foot of Deep River, where precipitous mountains come to shore, rendering the continuing of the road along it impracticable; it will have to be carried through the valleys behind.

Though the extent of land fit for settlement in this direction is comparatively small, it would be a mistake to suppose that the public domain is too unimportant or unprofitable to justify such considerable expenditures on account of it. The land that is good is usually profitable to the cultivator, and much of the remainder now yields and will continue to yield a larger revenue to the Crown than the sale of the lands would represent, by the produce of its forests, which afford profitable employment to thousands on the spot, and in the commerce it creates.

The making and improvement of the main road up the Gatineau is the next subject I would suggest as meriting attention; not as being of less importance than the preceding works mentioned, but because its claims to consideration apart from its character as a colonization road are such as to merit a special parliamentary grant.

Apart from being the inlet to the lands suitable for settlement on the banks of the Gatineau and in the valleys of its many tributaries, it is now the main road of a numerous though rather thinly scattered population who can hardly be expected, unassisted, to make and maintain a road of ninety miles in length, passing frequently over very rugged unoccupied ground, and which is much used by the traffic of a branch of trade that yields large profit to Government.

Besides the price of lands sold, Government must have already received upwards of half a million dollars as revenue for lumber cut on the Gatineau. Lumbering was carried on upon it to a large extent upwards of thirty years ago, and during the last nine years alone, I collected in ground rents and duties on saw logs cut on it, \$221,909, and far from being exhausted, the annual revenue has been gradually increasing from \$18,454 in 1853, to \$33,264 in 1861.

It would not seem unreasonable were the inhabitants of that section of country to ask one year's revenue, in thirty, of the public domain, to assist them in giving access to it for the purposes of trade and the extension of settlement in it.

The Gatineau road naturally presents itself in two principal divisions. The lower part, from the village of Hull, opposite the city of Ottawa, up the west bank of the Gatineau to Brooks's, at the Puagan Falls, in the township of Low, is thirty-five and a half miles in length. For this distance the road passes generally over rich clay soil, the alluvial flats of the river, with rocky ground on the spurs of the hills, which occasionally come close to the river, sometimes in precipitous rocky bluffs, hemming the road in to the narrowest practicable space along their base.

A stage runs regularly from the Ottawa to the Puagan. The land in that distance is all taken up and occupied, and the road in dry weather is a good country road, and much labor has been spent on parts of it by the inhabitants, but in continuous wet weather it becomes exceedingly cut up, with the deepest possible ruts, owing to the richness of the soil and the great traffic upon it. In many places it needs ditching and culverts, and there are some dangerous old bridges upon it, and bad rocky hills that are serious obstacles, requiring much expenditure to improve them.

A company was, I believe, formed for the macadamising of twenty-four and a half miles of this road, and a survey of the line and estimate of the cost of making it a macadamised road were made by George H. Perry, Esquire, Civil Engineer, but nothing further has since been done to my knowledge.

In a country like that north of the Ottawa, where the land fit for settlement is much exceeded in quantity by that which is unfit for cultivation, and is so frequently to be found in blocks too small and scattered to admit of the formation of extensive lines of settlement or to warrant the opening of colonization roads to them in detail; the improvement of main roads such as this which are absolutely necessary, to give access to the interior lands generally, is a very certain and advantageous way of forwarding the settlement of such parts of

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public lands as are fit for it; especially in such cases as this, where the road is the way of an extensive lumber trade, which creates a highly profitable market for the settlers and causes settlement to extend and prosper where it otherwise would not yet be in existence.

This would seem to afford an argument in favor of granting assistance to the Gatineau Colonized road company, should they proceed with their design, as it would, no doubt, powerfully forward the settlement of the Gatinean country. Uncertainty as to how much of the road they may improve, renders it difficult to estimate definitely any sum for a portion of the road, between the probable end of their works and the Puagan, where improvement is certainly required, and be provided for in a general estimate for this road, in case of a grant being obtained for it. An expenditure of at least \$4,000 would probably be desirable on this section, besides anything the company may be able to do.

The upper part of the Gatineau road, from the Puagan to the river Desert, is that on which expenditure in completing and improving it is most urgently required, not only to give access to several townships containing together much land suitable for settlement, but also for the benefit of the existing settlements and the important trade of the country. The distance is stated to be fifty-five miles. Much of it is merely a lumber track or winter road, parts of it have been worked upon by the settlers, as well as the lumberers. Some colonization funds have been spent on other parts of it. The worst part of it, owing to natural difficulty, is the first twelve miles above the Puagan. It is with much difficulty and some danger that an unloaded buck board can be drawn through from the Puagan to the Indian Mission Settlement at the river Desert, in the township of Maniwaki.

The first twelve miles, from the Puagan to the river Kazabazaa, embraces much of the most expensive ground to make a road upon that can be found. It has been opened from twelve to twenty feet wide. With some dry, even ground it presents steep clay hills, much very rocky ground, varied with long deep miry places, where the remains of numerous pine stumps that have merely been cut close by the ground, will be more expensive to take out than if the trees were left standing. The opening of the road in this imperfect manner and the making of some good causeways, a little side cutting, and some bridges was all that the limited funds hitherto available admitted of being done on such parts of the whole line as were worked on, and excepting partly in clearings, the grubbing and making the road, including ditching, grading and crowning, excavation and culverts, and the building and re-building of many bridges, has all to be done.

A new bridge is required on the Kazabazaa, 263 feet in length of work, and four feet higher than the present imperfect old one.

The next thirteen miles to the river Pickauock, in the township of Wright, passes over much more favorable ground; the cost per mile of making it a good road will be not much more than half the rate of the preceding portion.

The following nine miles from the Pickauock to Mr. Leamy's farm, at the upper out-line of Wright, would cost still less on an average per mile, were it not for two considerable bridges required, for which I have taken the necessary measurements. Beyond this no work whatever has been done with colonization monies.

The next six miles reaching to the middle of the township of Bouchette, owing to there being much unfavorable rocky ground, with two considerable bridges to be built, will be about twice as expensive to make as the last.

The remaining fifteen miles to the river Desert, though at present merely a narrow winter road, will be much less expensive in making than the preceding, being generally very favorable ground, but is all in woods till about a mile from the river Desert.

To make a fair turnpike road of the whole of this upper fifty-five miles in the manner described in the annexed specification but one-third wider, would, on account of the extremely unfavorable character of parts of it, probably cost about \$35,772. But by careful management in concentrating the labor on the bad and impassable parts of it, and making the last fifteen miles in the smallest scale to be useful, the whole might be made fairly passable for loaded wagons for about \$19,448.

This sum represents the smallest scale of work that Government could have performed without disadvantage or considerable loss of labor; and it would be necessary that it should be incurred if the settlement of the Indian township of Maniwaki, and the surveyed townships opposite and above it on the east side, containing much good land, be considered

desirable. Much of the line is uninhabited, especially the exceedingly rocky and rugged parts of it, and they will necessarily remain so. The upper part of Bouchette is unoccupied, so also is Maniwaki, excepting at the Desert, and it will long continue so, unless steps be taken for its survey and sale, which is very much to be desired.

It is to be regretted that Maniwaki, probably the best township for settlement on the Gatineau, should, where good land is so scarce, remain not only unoccupied, but a barrier to the progress of settlement in that direction.

From the river Desert upwards, the Gatineau road should be continued for colonization purposes, on the east side of the river up through the townships of Kensington, Aumond and Sicotte to Lake Baskatong in the township of that name; above the river Desert the west side of the Gatineau becomes less favorable for settlement than the east side. Above lake Baskatong, crystalline limestone is said to prevail up the river Baskatooshin.

The river Gatineau drains an area of about ten thousand square miles, and is probably about four hundred miles in length. In general, one quarter of the land in the known parts of the valley of the Gatineau may be estimated as fit for settlement, in the present acceptation of the expression, though more of it may eventually be occupied.

To describe the lands fit for settlement, I would quote the words of Peter Aylmer Esquire. His opinion is based on twenty-eight years personal acquaintance with the Gatineau country, which, in connection with his lumbering operations, he explored more extensively than any other person. He says the lands fit for settlement "are generally of an unusually rich and durable soil, and though stony in places consists of deep loam on the tables that form the hill tops, and clayey flats in the valleys, often covered with deep black earth, and admitting of drainage where requiring it, poor sandy soil being of rare occurrence."

As one of the causes of infertility, I would mention that I found crystalline limestone the most commonly prevailing rock along the Gatineau for upwards of sixty miles below the river Desert. There are farms on the Gatineau presenting upwards of two hundred acres of the richest alluvial fields in front, and in rear hills of crystalline limestone, valuable alike for building and as a manure for the soil, and covered with valuable wood, pine for building and hardwood for fuel. In the finest parts of Canada those advantages are seldom found together.

But the greater part of the Gatineau country, as is the case on the north side of the Ottawa, generally consists of rugged, unarable hilly land with occasional sandy plains, the good lands occurring in veins, irregular tracts, and isolated spots.

It is of the utmost importance, therefore, in the projection of settlement roads, that the extent and position of those favorable tracts, and the best means of connecting them, if not already definitely ascertained, should be carefully determined by cursory exploration and the road lines adapted accordingly, as any other system of projection otherwise based, will be sure to end in utter failure.

As the rugged and inferior lands are generally covered with a good growth of valuable timber, in the manufacture of which, much farm produce is consumed, creating a market on the spot, and high prices, it is evident that the value of the remaining quarter for settlement and cultivation is thereby very much increased. By careful selection, the extensive forest regions, unfit for cultivation, might be left untouched, while continuous lines of settlement might be formed on the intervening veins and tracts suitable for cultivation, and settlers be placed where they would derive the greatest benefit from the lumber trade, and at the same time the poor and unarable regions of the Ottawa be preserved for ever in their character as the greatest lumber forests in the world.

Grain, potatoes and other vegetables are successfully cultivated on large lumbering farms at thirty and forty miles north of the river Desert. In the settlement on the latter, fall wheat is cultivated with success.

Though but remotely connected with the subject of this report, it is worthy of remark that it has been well ascertained that behind the high country of the Laurentides, that is, at from about a hundred varying to two hundred miles north of the Ottawa, the country becomes lower, and that in this great depression, which is about a hundred miles in breadth, and of an unascertained length from east to west, containing the upper three hundred and fifty miles of the Ottawa's course, there is much land suitable for cultivation, said by those

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The river Desert, or more properly the settlement at its mouth, is about three miles with the latitude of Three Rivers, and the south shore of lake Baskatong is about four miles south of the latitude of Quebec.

I would now beg leave to recapitulate the works I have submitted for consideration in the order in which they seem immediately desirable to be proceeded with, and the appropriations that would be requisite for them, or the portions of them proposed. In doing so, I would respectfully explain that I submit a relative view of a system of works that would seem desirable for the most advantageous opening up of the localities most suitable for settlement, and of the probable expense of performing them at rates of cost considerably under that devoted to similar colonization works in Upper Canada, and which might occupy several years in execution, without presuming to indicate how much or how little of the Colonization funds should be at present devoted to them, were they even approved of and adopted; my sole object being to place at your disposal the result of the best information I have been able to accumulate, aided by my past experience in superintending such works.

Recapitulation of Proposed Works.

1st. For the making of the North Road from the Pêche to the Pickanock, 31 miles, at \$380, less remains of appropriation of 1861.....	\$ 8,780
2nd. For do. of 13½ miles of Suffolk Road.....	6,000
3rd. For do. of 16 miles of Hull & Bowman do.....	5,000
4th. For do. of 16 miles of Pontefract road	4,800
and Bridge over River Coulonage	3,232

5th. For do. of the main road up the Gatineau to the River Desert,	
55 miles from the Puagan upwards.....	19,448

(Were a special Parliamentary Grant obtainable for the Gatineau roads, the amount should not be less than \$35,772 for the part from the Puagan upwards, \$4,000 for the part below, and \$4,800 for a bridge over the Gatineau, which is much required about six miles above the mouth of it.)

Further Works proposed to be afterwards prosecuted.

The West Road in Derry or the East Road on do. or both.

The continuation of the Suffolk Road to Lake Monomoy.

The building of a Bridge over Black River in Waltham.

The continuation of the Gatineau Road towards Lake Baskatong.

But prior to that the continuation of the Gatineau and Coulonage Road.

For the position of the roads and works referred to in this report, I beg to refer to the accompanying map of the Counties of Ottawa and Pontiac. In it the representation of proposed roads not yet surveyed, it is only intended to indicate the locality and direction of them, leaving their position to be better determined by exploration and survey.

There is great danger of avaricious people, who own land elsewhere, taking up lands on Colonization roads as soon as it is known that they are to be opened, to the obstruction of settlers who really want the lots. To prevent this abuse the conditions of actual settlement should be promptly and rigidly enforced to the letter, and confiscation take place without a single day's delay, just in the same manner as has been punctually done for many years with lumberers' licences in this agency, when they failed to comply with the conditions required of them, though they might have made many payments on their licenses previously, and might lose thousands of dollars by the confiscation.

It would certainly be quite as easy and at least as just to enforce confiscation on the pretended settlers.

For a simple and self-acting system that would completely remove the obstruction settlement caused by parties taking up lands for the speculative purpose of wringing high prices out of actual settlers afterwards, I beg to refer you to my report on the St. Maurice Territory, transmitted in March, 1839, containing practical suggestions as to the sale and settlement of the waste lands of the Province, and the better adjustment of the rights of settlers and lumberers, exhibiting a system whereby lands could be sold to actual settlers at a merely nominal price without any loss of revenue the refund to the Crown.

I have the honor to be, respectfully,

Sir,

Your very obedient servant,

A. J. RUSSELL.

SPECIFICATION

Of the manner in which the Colonization Road from the Pusgan Falls, Gatinenu, to the River Coulonge, is to be made.

1. It is to be made on the site of it traced in the field, excepting where otherwise pointed out by the Superintendent, or person in charge. It is to be cleared to the width of 24 feet.
2. It is to be formed to the width of 16 feet; all roots, stumps, and stones are to be grubbed out 10 feet in width in the centre, which is to be solidly levelled up, and in dry ground evenly crowned with hard earth to the height of * inches in the centre, above the sides of the road. All roots, stumps, vegetable matter, stones, and timber, and other rubbish to be thrown 4 feet back from the edge of the (16 feet) road. All stumps in the sides of the road, that is 3 feet on each side of the grubbing, to be cut down even with the surface of the road when made. No crowning to be done till all the grubbing has been performed and inspected.
3. In moist or loamy ground, as pointed out by the Superintendent or person in charge, the centre of the road is to be crowned to the height of 18 inches above the sides, which are to be formed into continuous water-tables, so as to take off all the water. They may be crooked outside of the 16 feet to avoid stumps or other obstacles. Or where required by the person in charge, a ditch 3 feet wide and 2 feet deep, is to be sunk along the upper side, outside of the 16 feet, in addition to the crowning mentioned in the second clause; the earth from the ditch to be used in evenly crowning the centre, excepting where it is black earth or vegetable matter, which is not to be used in crowning.
4. Culverts, with sufficient discharge drains, are to be made in all hollows where water may at any time pass, or where pointed out by the Superintendent; the water-ways to be at least 15 inches wide, and 10 inches high, in the clear under—greater if required. They are to be made of cedar if it can be had, otherwise of black ash or pine flattened; to be not less than 5 inches thick, the pieces to be 16 feet in length. The covering to be supported by four cross pieces dovetailed into, and securely pinned to the side pieces. The top of the covering to be lower than the road, and well secured by pieces pinned across the ends.
5. Such small bridges as may be required, are to be built of the same description of timber as the culverts throughout; the covering to be of the same dimensions, resting on four stringers, 1 foot in least diameter, supported by, and securely pinned to substantial side-logs, of a height sufficient to give free passage for the water at highest flood; or on abutments of round logs of the same description of timber, laid in tiers of four each way, 10 inches in least diameter, slightly notched upon each other, and securely pinned at the corners. Larger bridges to be built in the same manner and of the same dimensions and descriptions of timber excepting that the stringers for water-ways of 20 feet are to be not less 9 inches broad by 14 deep or round cedar peeled not less than 13 inches thick may be

* Note.—Economy is effected by making the crowning only six inches on very dry ground (which merely provides ground levelling) when the nature of the ground and other circumstances admit of such being marked and provided for in contracting, or where work is done by a skilful overseer and a select party which, in difficult ground, is the best way of obtaining the best result from limited funds.

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—with handrails 4 feet high; the posts and caps of which are to be 6 inches square with braces 4 inches square and 3 feet long securely shouldered in and spiked to the posts and projecting pieces of the flooring every 10 feet. The flooring to be of 4 inches thick pine planks, or hewn cedar 5 inches thick, 18 feet in length, the projecting pieces to be 6 inches thick and 23 feet long boxed on the stringers. A binder 8 inches by 4 to be treenailed over on each side to retain the flooring. The posts of the handrails to be tenoned with pins as well as the cap above and well spiked. The abutments and piers to be loaded with stones to the depth of 2 feet laid on a flooring of sound round logs 8 inches in least thickness. The approaches to bridges to be raised so as not to be flooded in high water, and all materials to be at all times subject to the inspection and approval of the superintendent or person authorized by him. Chips, logs and rubbish, which might communicate fire, to be removed a rod back all round bridges, and from the ends of causeways, and logging up side hills.

6. The water to be thoroughly drawn away from water-tables or side-ditches, by off-side drains, 3 feet wide and 2 feet deep; or larger, if required to pass the water when greatest.

7. All swamps or boggy places to be causewayed or fascined. Causeways are to be evenly and closely laid, and hewn level on top and solidly bedded on the ground,—the swamps being first cut below the surface, unless where stringers are necessary to give elevations over water. Stringers to be at least one foot thick and four to the width of the road. The pieces to be of sound wood, 16 feet in length, and 8 inches at least in diameter, —of cedar, where it can be had. Nine feet at least, in width, in the centre to be evenly covered, 3 inches in depth, over the highest logs, with earth from the side ditches, which are to be 3 feet wide and 2 feet deep, on one or both sides if required to draw off the water; otherwise, the earth to be obtained elsewhere. Where it may be found more suitable, (or be specially required at the time of letting the work,) in swampy ground, the stumps are to be cut even with the surface, 16 feet in width; the centre evenly raised 6 inches,—the whole to be then covered with softwood brush and small trees, the tops towards and over the middle, to the depth of one foot in the centre, when compressed, and 6 inches at the sides. The surface to be closed with 3 inches of swamp earth, with 8 inches of hard earth over 9 feet in width of the centre, diminishing to 4 inches at the sides of the road, which may be made up with any earth obtainable. Causeways and fascines, and the grubbing previous to crowning, not to be covered up till inspected and approved of.

8. On steep sidelong hills the road is to be cut lower on the inside, and to be 12 feet wide; besides a ditch near the cutting, 18 inches wide and a foot deep. The face of all cuttings to have slope back of one foot, for every one in height. The outside to be built up solidly, with stones, or sound timber not less than 10 inches at the small end, with cross-ties every 7 feet. Or the side may be made up with a layer of soft wood brush, laid tops out, for every six inches of earth.

9. In forming the road, the earth is to be worked from the heights into the hollows; on banks and ridges, where more excavation is not specified, are to be cut down 2 feet, if necessary, to equalize the road. In deeper cuttings, the roadway may be only 12 feet wide. In passing among rocks, or in very rocky ground, a passage of 10 feet in width will be sufficient, the points of the rock to be broken down, and the spaces between them solidly built up with stones, and the whole crowned with hard earth.

10. In descending hills, the water to be turned off every 50 or 150 yards, according to the steepness, and at the head of all cuttings.

11. No earth work done later than 31st October will be accepted or paid for this season.

12. All trees that fall on the road till finally received, to be cleared out, as well as any overhanging or other timber, or trees that may be considered likely to fall into the road.

13. If the work be not commenced within 10 days after the day on which it is let, or should it be abandoned for 10 days, without sufficient reason being assigned to the satisfaction of the superintendent, or should the contractor, or any person employed by him, refuse to comply with the instructions of the superintendent, or person employed by him to oversee the work, the superintendent will be at liberty to annul the contract, or employment to do the work at the contractor's expense; and should there be less than six men

employed for every mile contracted for, the superintendent will be at liberty to make the number, by employing men at the expense of the contractor, should he see fit.

14. No work to be sub-let without the consent of the superintendent.

15. The work to be completed before the 1st November, 1861; but should more than half of it remain to be done on the 10th October, 1861, the superintendent may employ men at the contractor's expense to complete it.

16. Persons abandoning their work will forfeit the work performed.

17. One-third of the price will be paid when one-half of the work is done, and the remainder when it is completed and accepted; but the contractor's securities are to receive the balance due, or any part of it that the superintendent may consider them entitled to, should they be obliged to complete the work, or any part of it.

18. The contractor is to give the best accommodation in his power to the superintendent, or person appointed to oversee the work; such accommodation to be paid for a reasonable rate.

The Commissioner of Crown Lands will not consider it necessary to accept the lowest tender, nor to let the full extent of work advertised, should he find the rates proposed high.

